

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KEN C.K. CHEUNG and CHRISTOPHER J. SULLIVAN

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Appeal 2006-2304  
Application 09/975,507  
Technology Center 3600

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Decided: July 25, 2007

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Before TERRY J. OWENS, MURRIEL E. CRAWFORD, and STUART S. LEVY, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-7, 15, 17-37 and 40-47. Claims 8-14, 16, 38, and 39 have been withdrawn from consideration. We have jurisdiction over the appeal pursuant to 35 U.S.C. §§ 6(b) and 134.

## INTRODUCTION

The claims are directed to conformable skin element formed of a pressure transducer and flow modifier (Specification 5-7). Claim 1 is illustrative:

1. A conformable skin element system comprising one or more conformable skin elements, each skin element forming a pressure transducer and flow modifier, a controller, connections for coupling the conformable skin elements and the controller, a feedback control loop for generating and transmitting signals between the skin elements, the controller and the connections for conforming the skin elements to desired deformations.

The Examiner relies on the following prior art references to show unpatentability:

Lurz	US 4,516,747	May 14, 1985
Blackwelder	US 4,697,769	Oct. 6, 1987
Wyganski	US 5,209,438	May 11, 1993
Mangalam	US 5,218,863	Jun. 15, 1993
McKillip	US 5,752,672	May 19, 1998

The rejections as presented by the Examiner are as follows:

1. Claims 1-6, 15, 17-25, 28, 29, 31, 36, and 47 are rejected under 35 U.S.C. § 102(b) as anticipated by Lurz.
2. Claims 26, 27, 32-35 and 41-46 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lurz in view of Blackwelder.
3. Claim 7 is rejected under 35 U.S.C. § 103(a) as unpatentable over Lurz in view of Mangalam.
4. Claim 30 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lurz in view of McKillip.

5. Claims 37 and 40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lurz in view of Wagnanski.

The Appellants contend that Lurz does not disclose a skin element that includes a feedback control loop for conforming the skin elements to the desired deformations.

The Appellants also contend that Lurz does not disclose a skin element forming a pressure transducer and a flow modifier.

Lastly, Appellants contend that Lurz does not disclose mounts on the surface of the skin element system for mounting the skin elements which are cantilevered on the skin element to allow cantilever deflection of the skin elements.

### ISSUES

The first issue is whether Appellants have shown that the Examiner erred in finding that Lurz discloses a skin element that includes a feedback control loop for conforming the skin elements to the desired deformations.

The second issue is whether Appellants have shown that the Examiner erred in finding that Lurz discloses a conformable skin element forming a pressure transducer and flow modifier.

The third issue is whether Appellants have shown that the Examiner erred in finding Lurz discloses mounts on the surface for mounting the skin elements which are cantilevered on the skin element to allow cantilever deflection of the skin elements.

## FINDINGS OF FACT

Lurz discloses conformable skin element system comprising conformable skin elements (1, 2, 3, 4) (Lurz, Fig. 1; col. 3, ll. 48-65). Each skin element (1, 2, 3, 4) forms a pressure transducer (1, 3, 4) and a flow modifier (2). Lurz includes a closed feedback loop between the sensors (1, 3, and 4) and the flow modifiers (2) and a micro-processor (7) (Fig. 1). The flow modifiers of the skin element are vibration transmitters (2) (Lurz, col. 4, ll. 1-7). The feedback loop controls the vibration of the vibration transmitters. The deformation of the skin elements is not controlled. The feedback loop does not conform the skin elements to the desired deformations.

Blackwelder does not disclose a feedback control loop that conforms the skin elements to desired deformations.

Mangalam does not disclose a feedback control loop that conforms the skin elements to desired deformations.

McKillip does not disclose a feedback control loop that conforms the skin elements to desired deformations.

Wyganski discloses that perturbation producing elements 48a and 48b can be mounted so as to allow cantilever deflection of the skin element (Figure 1f).

## DISCUSSION

Lurz does not disclose that the feedback loop, for generating and transmitting signals between the skin elements, the controller or micro-processor and the connections, conforms the skin elements to the desired deformations. Any deformation of the skin elements that occurs in the Lurz

device is not controlled by the feedback loop between the controller and skin elements. As such, we will not sustain the rejection of claim 1 and claims 2-6 and 15, 17-24, 25, 28, and 29 dependent thereon under 35 U.S.C. § 102(b) as being anticipated by Lurz.

We will sustain this rejection as it is directed to claim 31 and claims 36 and 47 dependent thereon, because these claims do not recite that the feedback control loop conforms the skin elements to desired deformations. Appellants' argument that Lurz does not disclose skin elements that are transducers and flow modifiers (Brief 7) is not persuasive because in our view, Lurz's elements 1-4 together form a skin element with elements 1, 3 and 4 being the transducers and element 2 being the flow modifier.

We will not sustain the rejection of claims 26 and 27 under 35 U.S.C. § 103 as being unpatentable over Lurz in view of Blackwelder because claims 26 and 27 are dependent on claim 1 and thus include the subject matter that the feedback loops controls the deformation of the skin elements found. This subject matter is missing in Lurz and Blackwelder does not cure this deficiency.

We will sustain this rejection as it is directed to claims 32, 33-35, and 41-46 because these claims do not recite that the feedback loop controls the deformation of the skin elements. We note that Appellants' arguments regarding the failure of Lurz to expressly disclose each element of the claims is not persuasive because the rejection is based on 35 U.S.C. § 103 and thus this issue is not what it expressly disclosed in Lurz but what would have been obvious to a person of ordinary skill in the art at the time of the invention. In this regard, it is the Examiner's contention that subject matter of the claims not disclosed by Lurz or Blackwelder would have been an

obvious design choice for a person of ordinary skill in view of the lack of criticality of the recitations in these claims. The Appellant has not addressed the obviousness contention of the Examiner with regard to these claims. As such, Appellants have not addressed the obviousness of claims 32, 33-35 and 41-45 in view of the teaching of Lurz in view of Blackwelder.

We will not sustain the rejection of claim 7 under 35 U.S.C. § 103 as being unpatentable over Lurz in view of Mangalam because claim 7 is dependent on claim 1 and Mangalam does not cure the deficiencies noted above for Lurz.

We will not sustain the rejection of claim 30 under 35 U.S.C. § 103 as being unpatentable over Lurz in view of McKillip because claim 30 is dependent on claim 1 and McKillip does not cure the deficiencies noted above for Lurz..

We will sustain the Examiner's rejection of claims 37 and 40. The skin elements of Lurz must be mounted in some way and Wygnanski discloses that one of the ways of mounting the skin elements i.e., so as to allow cantilever movement, was a known way of mounting the skin elements. It was well within the skill in the art to choose a known way of mounting the skin elements.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED-IN-PART

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